

REMARKS

Claims 1-16 are pending in the present Application. Claims 9-13 have been withdrawn. No claims have been canceled, claims 1-8 and 14-16 have been amended, and no claims have been added, leaving claims 1-8 and 14-16 for consideration upon entry of the present Amendment. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claims 1 and 14 have been amended to better define the invention. In particular, claims 1 and 14 have been amended to clarify that the invention is directed to a multilayer surface covering. Support for this amendment can be found at least at paragraphs [0001], [0003], and [0042], and throughout the specification. Claims 2-8 and 15-16 have been amended for consistency with claims 1 and 14.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-7, and 14-16 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Hanoka (US 6,114,046)(hereinafter “Hanoka”) in view of Dewart et al. (US 6,114,456)(hereinafter “Dewart”). (Office Action dated 3/18/2010, page 3) Applicants respectfully traverse this rejection.

“A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). To find obviousness, the Examiner must “identify a reason that would have prompted a person of ordinary skill in the art in the relevant field to combine the elements in the way the claimed new invention does.” *Id.*

Hanoka is generally directed to an encapsulating material comprising a layer of metallocene polyethylene placed between two layers of ionomer, especially for use in solar panels. (Abstract) As demonstrated in FIG. 1, the encapsulant material 10 comprises an inner layer 12 and outer layers 14 and 16. (Col. 4, lines 65-66) The inner layer 12 can be formed of metallocene polyethylene and the outer layers 14 and 16 are can be formed of an ionomer. (Col. 5, lines 7-9)

The metallocene polyethylene inner layer is prepared by using as a catalyst an organometallic coordination compound, which is obtained as a cyclopentadienyl derivative of a transition metal or a metal halide. (Col. 5, lines 9-12) Hanoka teaches that the addition of 14%

octene to the metallocene polyethylene produces an inner layer 12 having excellent optical clarity. (Col. 5, lines 23-25)

The two ionomer layers are based on an ethylene methacrylic acid copolymer (such copolymer containing at least 10% (by wt.) of the carboxylic acid with at least 50% of the acid as "free" (un-neutralized acid). (Col. 2, line 67 – Col. 3, line 3) More specifically, Hanoka discloses that the ionomer comprises a copolymer of ethylene and methacrylic acid, or acrylic acid, which has been neutralized with the addition of a salt which supplies a cation such as Li⁺, Na⁺, K⁺, Ca⁺⁺, Zn⁺⁺, Mg⁺⁺, Al⁺⁺⁺, or a copolymer of ethylene and a vinyl ester (i.e., ethylene methylmethacrylate copolymer to which cations such as those listed above have been added by saponification of the ester. (Col. 5, lines 15-22)

Hanoka describes the process for preparing the encapsulating material as follows:

The encapsulant material 10 can be formed by any number of film or sheet coextrusion processes, such as blown-film, modified blown-film, calendaring, and casting. In one embodiment, the encapsulant material 10 is formed by coextruding, in a blown film process, the metallocene polyethylene layer 12 and the ionomer layers 14, 16. In particular, the layer of metallocene polyethylene 12 includes first and second sublayers 12a, 12b of metallocene polyethylene. The first ionomer layer 14 is coextruded with the first sublayer 12a of metallocene polyethylene, and the second ionomer layer 16 is coextruded with the second sublayer 12b of metallocene polyethylene. The first layer 12a of metallocene polyethylene (along with the first ionomer layer 14) is then bonded to the second layer 12b of metallocene polyethylene (along with the second ionomer layer 16) to produce the encapsulant material 10. In this way, a thicker encapsulant layer and the desired 3-layer structure can be formed.

(Col. 6, lines 16-33)

Thus, in summary, Hanoka discloses three-layer encapsulating material (i.e., ionomer – metallocene polyethylene – ionomer).

Independent claims 1 and 14 are directed to multilayer surface covering. In contrast, Hanoka is directed to an encapsulant material for solar cells. Since Hanoka is directed to an encapsulant material, and not to a multilayer surface covering, Applicant's respectfully assert that one of skill in the art would not have looked to, and in fact disregarded the encapsulant material for solar cells disclosed in Hanoka for developing a multilayer surface covering.

In making the rejection, the Examiner alleged Hanoka teaches:

a laminate; the laminate comprises an ionomeric layer, a metallocene catalyzed polyethylene layer, two inner layers of highly transparent material (col 5, lines 2+)

such as a metallocene catalyzed polyethylene layer, and an ionomer layer (Figure 1). The ionomeric layer reads on the claimed wear layer, the two polyethylene transparent layers read on the claimed substrate and intermediate layers.

(Office Action dated 3/18/2010, page 3) Applicants respectfully disagree for the following reasons.

First, Hanoka does not teach a laminate comprising “an ionomeric layer, a metallocene catalyzed polyethylene layer, two inner layers of highly transparent material (col 5, lines 2+) such as a metallocene catalyzed polyethylene layer, and an ionomer layer (Figure 1).” More specifically, Hanoka does not teach two polyethylene transparent layers as suggested by the Examiner. Rather, Hanoka teaches a three-layer encapsulating material (i.e., ionomer layer – metallocene polyethylene layer – ionomer layer). Alternatively, Hanoka discloses a solar cell having the encapsulating material (i.e., ionomer layer – metallocene polyethylene layer) disposed on a zinc oxide layer (32), which is disposed on Copper Indium Diselenide (CIS) film (34), which is then disposed on a substrate layer 28. (col. 7, lines 6-13) The substrate layer 28 can be formed of glass, plastic or metal. (col. 7, lines 13-14) The metallocene polyethylene layer and ionomer layer disclosed by Hanoka do not read on the claimed substrate and intermediate layers. Since Hanoka does not teach a multilayer surface covering comprising a polymer substrate, a wear layer made of polymer of an ionomeric type, *and between the substrate and the wear layer, an intermediate layer of an olefinic polymer containing from 1 to 40 parts by weight of a metallocene per 100 parts by weight of the olefinic polymer*, Hanoka fails to teach all elements of the claimed invention.

Second, the metallocene catalyzed polyethylene layer is not a an intermediate layer of an olefinic polymer containing from 1 to 40 parts by weight of a metallocene per 100 parts by weight of the olefinic polymer. Rather, the metallocene catalyzed polyethylene layer is composed entirely of a metallocene catalyzed polyethylene, or optionally may contain 14% octene.

Finally, the three-layer structure presented in Hanoka represents a symmetrical multilayer product (i.e., ionomer – metallocene polyethylene – ionomer). In contrast, the claimed invention provides a multilayer surface covering, which is asymmetrical (i.e., polymer substrate – olefinic polymer containing from 1 to 40 parts by weight of a metallocene per 100 parts by weight of the olefinic polymer – wear layer made of a polymer of the ionomeric type). Hanoka simply does not teach a multilayer product as claimed. Mere substitution of the metallocene catalyzed

polyethylene layer of Hanoka with an intermediate layer of an olefinic polymer containing from 1 to 40 parts by weight of a metallocene per 100 parts by weight of the olefinic polymer would not result in a multilayer surface covering as claimed.

Dewart is cited for teaching “a composition comprising a metallocene catalyzed medium density polyethylene and low density polyethylene in amounts of 30-97%.” (Office Action dated 3/18/2010, page 3) Dewart discloses blown films comprising a homogeneous blend of a metallocene-catalyzed medium density polyethylene (mMDPE) with low density polyethylene (LDPE) and/or a linear low density polyethylene (LLDPE). (Abstract) It is understood that the Examiner is suggesting that substitution of the metallocene catalyzed polyethylene layer of Hanoka with the film comprising a homogeneous blend of a metallocene-catalyzed medium density polyethylene (mMDPE) with low density polyethylene (LDPE) and/or a linear low density polyethylene (LLDPE) would result in a multilayer surface covering as claimed. As neither reference discloses a multilayer product as claimed, Applicants respectfully disagree.

Specifically, as discussed in detail above, Hanoka does not teach a multilayer product covering as claimed. Rather, Hanoka discloses a symmetrical multilayer product (i.e., ionomer – metallocene polyethylene – ionomer). Mere substitution of the metallocene catalyzed polyethylene layer of Hanoka with the mMDPE/LDPE or LLDPE film disclosed by Dewart would result in an multilayer product having an “ionomer – mMDPE/LDPE or LLDPE film – ionomer” layered structure, wherein the ionomer layers are copolymer(s) of ethylene and methacrylic acid, or acrylic acid, which has been neutralized with the addition of a salt which supplies a cation such as Li⁺, Na⁺, K⁺, Ca⁺⁺, Zn⁺⁺, Mg⁺⁺, Al⁺⁺⁺, or a copolymer of ethylene and a vinyl ester (i.e., ethylene methylemethacrylate copolymer).

In addition, taking into account that the claims relate to a multilayer surface covering, that it is known that a surface covering has specific mechanical properties, particularly in terms of mechanical resistance, wear and indentation resistance, but also in terms of comfort, softness, sound and heat insulation, it would not have been obvious to the skilled artisan, starting from the encapsulation material of Hanoka, to incorporate and use the film (not a surface covering) to arrive at the claimed invention.

Indeed, Applicants respectfully assert that even if Dewart discloses a polyethylene composition comprising 0.5 to 100% of a metallocene catalyzed polyethylene, and preferably comprising 0 to 99.5% of LDPE and/or LLDPE, the skilled artisan would not combine the

teaching of Dewart with Hanoka because there is no suggestion in the two documents that would have prompted the skilled artisan to combine these two documents in a manner suggested by the Examiner and that the teaching of Hanoka would have been disregarded as it related to encapsulation material for solar cells and not to a multilayer surface covering.

In summary, neither Hanoka and Dewart, considered alone or in combination, teach or suggest a multilayer surface covering comprising a polymer substrate, a wear layer made of polymer of an ionomeric type, and between the substrate and the wear layer, *an intermediate layer of an olefinic polymer containing from 1 to 40 parts by weight of a metallocene per 100 parts by weight of the olefinic polymer*, as claimed. Additionally, Applicants respectfully assert that one of skill in the art would not have considered the encapsulating solar cell material disclosed by Hanoka when preparing a multilayer surface covering as claimed. For these reasons at least, Applicants believe that a *prima facie* case of obviousness has not been made. Applicants respectfully request reconsideration and withdrawal of the rejection.

Claim 8 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Hanoka in view of Dewart, as applied to claims 1-7 and 14-16 above, and further in view of JP-0923018 (hereinafter JP'018). (Office Action dated 3/18/2010, page 4) Since JP'018 fails to make up for the deficiencies of Hanoka and Dewart, Applicants respectfully traverse this rejection.

JP'018 is cited for teaching a polyurethane layer may be applied to a solar cell module. (Office Action dated 3/18/2010, page 4). JP'018 discloses a solar battery module comprising several battery cells electronically connected to one another and sealed with an aliphatic and/or polyurethane resin on a substrate. (Abstract) However, JP'018 does not teach or suggest a multilayer surface covering comprising a polymer substrate, a wear layer made of polymer of an ionomeric type, and between the substrate and the wear layer, *an intermediate layer of an olefinic polymer containing from 1 to 40 parts by weight of a metallocene per 100 parts by weight of the olefinic polymer*, as claimed. For these reasons at least, Applicants believe that a *prima facie* case of obviousness has not been made. Applicants respectfully request reconsideration and withdrawal of the rejection.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

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Date: May 5, 2010
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